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Paper 35 - Allied Health

ELIMINATING BACTERIAL COUNT IN INTENSIVE CARE UNIT USING HYDROGEN PEROXIDE PLUS SILVER (H2O2 + AG) : BASIS FOR AN ENHANCED DISINFECTION PROTOCOL

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ABSTRACT

This study aimed to determine the effectiveness of disinfection protocol using hydrogen peroxide plus silver (H2O2 + Ag) disinfectant on the common objects in intensive care unit. The common objects tested in ICU were blood pressure cuff, inner door handle, hospital bed (side rail) and wall. The study utilized repeated measures (time series design) as a research design wherein the researcher purposively selected the five intensive care unit cubicles with the mentioned common objects which were intentionally contaminated with five bacteria: Pseudomonas aeruginosa, Klebsiella pneumoniae, Staphylococcus aureus, Escherichia coli and Staphylococcus epidermidis. After contamination, the intensive care unit was disinfected with hydrogen peroxide plus silver solution. Then bacterial culture was done on each common object at different time intervals: before disinfection, after contamination, 30 minutes after disinfection, 12 hours after disinfection and 24 hours after disinfection. Relative humidity (%) and temperature of the ICU cubicle (0C) were noted on each bacterial culture. Results show that hydrogen peroxide plus silver disinfectant is effective on the bacterial count in common objects in ICU except on the blood pressure cuff in ICU cubicle 4 and ICU cubicle 5 which exhibited growth 30 minutes after utilization of the disinfection protocol. There were 12 colony forming unitt (cfu) seen on bacterial culture in blood pressure cuff contaminated with Escherichia coli while there were three cfu seen on the culture on the blood pressure cuff contaminated with Staphylococcus epidermidis. This could be due the to duration of the disinfection protocol and the virulence of the bacteria.